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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/757,446 | 01/15/2004 | James S. Schutzbach | 215185.00707 | 4116 |

27160 7590 09/18/2006

PATENT ADMINISTRATOR
KATTEN MUCHIN ROSENMAN LLP
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| EXAMINER | |
|---|---|
| PRETLOW, DEMETRIUS R | |
| **ART UNIT** | **PAPER NUMBER** |
| 2863 | |

DATE MAILED: 09/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/757,446 | SCHUTZBACH ET AL. | |
| | Examiner | Art Unit | |
| | Demetrius R. Pretlow | 2863 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *05 September 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-23* is/are pending in the application.

4a) Of the above claim(s) ____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *15 January 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *1/15/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 101*

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-7,14-23 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims 1-7,14-23 fail to produce a useful, concrete and tangible **result**. For example a **result** is not stored, displayed or conveyed to the user. See

http://www.uspto.gov/web/offices/com/sol/og/2005/week47/patgupa.htm .

### *Specification*

1. The disclosure is objected to because of the following informalities:

   On page 6, line 10, it appears that --form-- should be --from--.

   Appropriate correction is required.

### *Claim Objections*

2. Claim 5 is objected to because of the limitation "the first flow meter" in line 2 and "the second flow meter" in line 3. There is insufficient antecedent basis for this limitation in the claim.
3. Claim 17 is objected to because of the following informalities:

In claim 17, line 14 it appears that --form-- should be --from--. Appropriate correction is required.

***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-13,17-23 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1- 22 of U.S. Patent No. 6,757,623. Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 1-23 of 2006/0116829 are anticipated by claims 1-12 and 16-22 of U.S. Patent No. 6,757,623.

| 2006/0116829 | 6,757,623 |
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| 1. A method of analyzing flow of a substance in a sewer network, comprising: collecting first data representative a first flow velocity of a substrate at a first location in a sewer network; collecting second data representative of a second flow velocity of the substance at a second location in the sewer network; and determining, by a processor, a travel time corresponding to the time it takes for the substance to travel between the first location and the second location, using the first data, the second data, and a constant.<br><br>2. The method of claim 1, and further comprising: detecting a first flow volume at the first location at a first time; detecting a second flow volume at the second location at a second time, the second time being a function of the first time and the travel time; transmitting, via the at least one communications link, the first flow volume and the second flow volume to a processor; and determining by the processor, a net flow corresponding to a difference between the second flow volume and the first flow volume.<br><br>3. The method of claim 1 | 1. A method of analyzing flow of a substance in a sewer network comprising: collecting first data representative of a first flow velocity of a substance at a first location in a sewer network; collecting second data representative of a second flow velocity of the substance at a second location in the sewer network; and determining, by a processor, a travel time corresponding to a time required for the substance to travel between the first location and the second location, using the first data, the second data, and a constant, wherein the step of determining does not require additional data relating to a distance or characteristics of the sewer network.<br><br>2. The method of claim 1, and further comprising: detecting a first flow volume at the first location at a first time; detecting a second flow volume at the second location at; a second time, the second time being a function of the first time and the travel time; transmitting, via the at least one communications link, the first flow volume and the second flow volume to a processor; and determining, by the processor, a net flow corresponding to a difference |

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| wherein the determining step requires no additional data relating to the sewer network or the substance.<br><br>4. The method of claim 1 wherein the determining step comprises dividing the constant by a sum or an average of the first data and the second data.<br><br>5. The method of claim 1 wherein the constant corresponds to historic flow volume data from the first flow meter for the first location and historic flow volume data from the second flow meter for the second location, each of said historic flow volume data relating to a plurality of time increments.<br><br>6. The method of claim 1, further comprising developing a distribution of first flow volume data over a period of time and a distribution of second flow volume data over the period of time, and wherein the constant corresponds to a goodness of fit test performed on the distributions.<br><br>7. The method of claim 1 wherein the processor is integral with a flow meter that is located at the first location or the second location.<br><br>8. A system for analyzing flow of a substance between a first location and a second location, comprising: a first meter capable of detecting a first | between the second flow volume and the first flow volume.<br><br>3. The method of claim 1 wherein the determining step requires no additional data relating to the sewer network or the substance.<br><br>4. The method of claim 1 wherein the determining step comprises dividing the constant by a sum or an average of the first data and the second data.<br><br>5. The method of claim 1 wherein the constant corresponds to historic flow volume data from a first flow meter for the first location and historic flow volume data from a second flow meter for the second location, each of said historic flow volume data relating to a plurality of time increments.<br><br>6. The method of claim 1, further comprising developing a distribution of first flow volume data over a period of time and a distribution of second flow volume data over the period of time, and wherein the constant corresponds to a goodness of fit test performed on the distributions.<br><br>7. The method of claim 1 wherein the processor is integral with a flow meter that is located at the first location or the second location.<br><br>8. A system for analyzing |

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| flow velocity at a first location; and a second meter capable of detecting a second flow velocity at a second location; wherein the first meter and the second meter are in communication with a processor, and the processor is programmed to derive a travel time of a flow from the first location to the second location using the first flow velocity, the second flow velocity, and a constant.<br><br>9. The system of claim 8 wherein the first meter is also capable of detecting a first flow volume at the first location at a first time, the second meter is also capable of detecting a second flow volume at the second location at a second time, the second time corresponds to a sum of the first time and the travel time, and the processor is further programmed to determine a net flow based on the difference between the second flow volume and the first flow volume.<br><br>10. The system of claim 8 wherein the processor does not require additional data relating to the flow or the locations.<br><br>11. The system of claim 8 wherein the first location and the second location are locations within a sewer network.<br><br>12. The system of claim 8 wherein the constant | flow of a substance between a first location and a second location within a sewer network, comprising: a first meter capable of detecting a first flow velocity at a first location within a sewer network; and a second meter capable of detecting a second flow velocity at a second location within the sewer network; wherein the first meter and the second meter are in communication with a processor, and the processor is programmed to derive a travel time of a flow from the first location to the second location using the first flow velocity, the second flow velocity, and a constant, and wherein the processor does not require additional data relating to a distance or characteristics of the sewer network.<br><br>9. The system of claim 8 wherein the first meter is also capable of detecting a first flow volume at: the first location at a first time, the second meter is also capable of detecting a second flow volume at the second location at a second time, the second time corresponds to a sum of the first time and the travel time, and the processor is further programmed to determine a net flow based on the difference between the second flow volume and the first flow volume.<br><br>10. The system of claim 8 wherein the processor does not |

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| corresponds to historic flow volume data from the first meter for the first location and historic flow volume data from the second meter for the second location, each of said historic flow volume data corresponding to a plurality of the increments.<br><br>13. The system of claim 8 wherein the processor is integral with the first or second meter.<br><br>17. A method of analyzing flow of a substance between a first location and a second location, comprising: collecting a first set of flow volume data at a first location over a plurality of time increments; collecting a second set of flow volume data at a second location over the plurality of time increments; identifying a first distribution of the first set of flow volume data over time; identifying a second distribution of the second set of flow volume data over time; identifying a constant corresponding to a relation of the first distribution and the second distribution; detecting a first flow velocity at the first location; detecting a second flow velocity at the second location; and determining a transport time corresponding to transport of a substrate form the first location using the first flow velocity, the second flow velocity, and the constant, | require additional data relating to the flow or the locations.<br><br>11. The system of claim 8 wherein the constant corresponds to historic flow volume data from the first meter for the first location and historic flow volume data from the second meter for the second location, each of said historic flow volume data corresponding to a plurality of the increments.<br><br>12. The system of claim 8 wherein the processor is integral with the first or second meter.<br><br>16. A method of analyzing flow of a substance between a first location and a second location in a sewer network, comprising: collecting a first set of flow volume data at a first location in a sewer network over a plurality of time increments; collecting a second set of flow volume data at a second location in the sewer network over the plurality of time increments; identifying a first distribution of the first set of flow volume data over time; identifying a second distribution of the second set of flow volume data over time; identifying a constant corresponding to a relation of the first distribution and the second distribution; detecting |

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| wherein the determining step does not require additional data.<br><br>18. The method of claim 17, further comprising: detecting, using the first flow meter at a first time, an upstream flow volume; detecting, using the second flow meter at a second time, a downstream flow volume, the second time corresponding to a sum of the first time and the transport time; and calculating a net flow corresponding to a difference between the downstream flow volume and the upstream flow volume.<br><br>19. The method of claim 17 wherein the relation in the identifying step comprises a goodness of fit test.<br><br>20. A method of analyzing flow of a substance in a sewer network, comprising: collecting, using a plurality of upstream flow meters, a plurality of sets of upstream flow volume data, each corresponding to each upstream flow meter over a period of time; collecting, using a downstream flow meter, a set of downstream flow volume data over the period of time; p1 identifying a plurality of upstream distributions, each corresponding to a set of upstream flow volume data over time; identifying a downstream distribution corresponding to the set of downstream flow volume data over time; | a first flow velocity at the first location; detecting a second flow velocity at the second location; and determining a transport time corresponding to transport of a substance from the first location using the first flow velocity, the second flow velocity, and the constant, wherein the determining step does not require additional data relating to a distance or characteristics of the sewer network.<br><br>17. The method of claim 16, further comprising: detecting, using a first flow meter at a first time, an upstream flow volume; detecting, using a second flow meter at a second time, a downstream flow volume, the second time corresponding to a sum of the first time and the transport time; and calculating a net flow corresponding to a difference between the downstream flow volume and the upstream flow volume.<br><br>18. The method of claim 16 wherein the relation in the step of identifying a constant comprises a goodness of fit test.<br><br>19. A method of analyzing flow of a substance in a sewer network, comprising: collecting, using a plurality of upstream flow meters in a sewer network, a plurality of sets of upstream flow volume data, each corresponding to |

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| identifying a constant corresponding to a relation of the upstream distributions and the downstream distribution; detecting a first flow velocity at a upstream location; detecting a second flow velocity at a downstream location corresponding to the downstream flow meter; and determining a transport time corresponding to transport of a substance from the upstream location to the downstream location using the first flow velocity, the second flow velocity, and the constant, wherein the determining step does not require additional data.<br><br>21. The method of claim 20 further comprising: detecting, using a first flow meter selected from the plurality of upstream flow meters at a first time, an upstream flow volume; detecting, using the downstream flow meter at a second time, a downstream flow volume, the second time corresponding to a sum of the first time and the travel time; and calculating a net flow corresponding to a difference between the downstream flow volume and the upstream flow volume.<br><br>22. The method of claim 21 wherein the upstream location corresponds to a location of one of the plurality of upstream flow meters.<br><br>23. The method of claim 20 wherein the relation in the | each upstream flow meter over a period of time; collecting, using a downstream flow meter in the sewer network, a set of downstream flow volume data over the period of time; identifying a plurality of upstream distributions, each corresponding to a set of upstream flow volume data over time; identifying downstream distribution corresponding to the set of downstream flow volume data over time; identifying a constant corresponding to a relation of the upstream distributions and the downstream distribution; detecting a first flow velocity at a upstream location; detecting a second flow velocity at a downstream location corresponding to the downstream flow meter; and determining a transport time corresponding to transport of a substance from the upstream location to the downstream location using the first flow velocity, the second flow velocity, and the constant, wherein the determining step does not require additional data relating to a distance or characteristics of the sewer network.<br><br>20. The method of claim 19 further comprising: detecting, using a first flow meter selected from the plurality of upstream flow meters at a first time, an upstream flow volume; detecting, using the downstream flow meter at a second time, a |

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| identifying step comprises a goodness of fit test. | downstream flow volume, the second time corresponding to a sum of the first time and the travel time; and calculating a net flow corresponding to a difference between the downstream flow volume and the upstream flow volume.<br><br>21. The method of claim 20 wherein the upstream location corresponds to a location of one of the plurality of upstream flow meters.<br><br>22. The method of claim 19 wherein the relation in the step of identifying a constant comprises a goodness of fit test. |

A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

Claims 14-16 rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 13-15 of prior U.S. Patent No. 6,757,623. This is a double patenting rejection.

| 10/757,446 | 6,757,623 |
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| 14. A method of analyzing flow of a substance in a sewer network, comprising: collecting, using a plurality of upstream flow meters in a network, a plurality of upstream flow volume data points, each corresponding to each upstream flow meter over a period of time; collecting, using a downstream flow meter in the network, a downstream flow volume data point; determining a travel time corresponding to travel of a substance between an upstream location and a downstream location in the network, the downstream location corresponding to the downstream flow meter, such that that the determining is performed using the plurality of upstream flow volume data points, the downstream flow volume data point, and a constant, without requiring additional data relating to the network or the substance. | 13. A method of analyzing flow of a substance in a sewer network, comprising: collecting, using a plurality of upstream flow meters in a sewer network, a plurality of upstream flow volume data points, each corresponding to each upstream flow meter over a period of time; collecting, using a downstream flow meter in the sewer network, a downstream flow volume data point; determining a travel time corresponding to travel of a substance between an upstream location and a downstream location in the sewer network, the downstream location corresponding to the downstream flow meter, such that that the determining is performed using the plurality of upstream flow volume data points, the downstream flow volume data point, and a constant, without requiring additional data relating to the sewer network or the substance. |
| 15. The method of claim 14, further comprising: detecting a first flow volume at the upstream location at a first time; detecting a second flow volume at the downstream location at a second time, the second time being a function of the first time and the travel time; and determining a net flow corresponding to a | 14. The method of claim 13, further comprising: detecting a first flow volume at the upstream location at a first time; detecting a second flow volume at the downstream location at a second time, the second time being a function of the first time and the travel time; and determining a net flow corresponding to a |

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| difference between the downstream flow volume and the upstream flow volume.<br><br>16. The method of claim 14 wherein the upstream location corresponds to a location of one of the plurality of upstream flow meters. | difference between the downstream flow volume and the upstream flow volume.<br><br>15. The method of claim 13 wherein the upstream location corresponds to a location of one of the plurality of upstream flow meters. |

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Demetrius R. Pretlow whose telephone number is (571) 272-2278. The examiner can normally be reached on Mon.-Fri. 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on (571) 272-2269. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Demetrius R. Pretlow 9/12/06

John Barlow
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